



Workers begin construction of a pilot plant that will treat agricultural drainwater.

Reclamation Builds Plant to Test Selenium Removal from Irrigation Drainage in West San Joaquin Valley

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FRESNO, Calif. – Reclamation's Mid-Pacific Region is constructing a Demonstration Treatment Plant that will be used to determine the best agricultural drain water treatment procedures for full-scale processing of irrigation drainage in portions of the western San Joaquin Valley.

Sladen Construction Group, Inc., of Stayton, Ore., was awarded \$22.3 million to build the plant in the Panoche Drainage District, near Firebaugh, in Fresno County.

Some of the world's most productive agricultural lands are located in the San Joaquin Valley, but in the Central Valley Project's San Luis Unit and adjacent lands a lack of full drainage service affects agriculture. Clay soils beneath farmland prevent irrigation water from percolating deeper into the soil and away from crop roots, causing water to accumulate in shallow water tables.

Better drainage will assist agriculture while avoiding or mitigating impacts to the environment and water quality. The irrigation drainage contains salt and elevated levels of a naturally occurring element, selenium.

The plant will be used to establish performance specifications for proposed selenium-removal technologies (reverse osmosis and bio-treatment); evaluate pretreatment options (flocculation, plate settler, media filtration, ultra-filtration, pH adjustment); and collect data for designs and cost estimates for future drainage plants in the CVP's San Luis Unit.

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The facility will be able to process 200 gallons per minute of agricultural drainage. The plant will include an 11,600-square-foot structure and 14 holding tanks of up to 65 feet in diameter and up to 26 feet in height.

The facility is scheduled to be completed in March 2014 and operated for at least 18 months to collect data for final designs of a full scale treatment plant. Afterward, operation of the facility may continue by Reclamation or a designated operating partner.

If alternative treatment technologies that are more effective and/or less costly than the proposed treatment processes emerge, the plant will have the capability to evaluate them using a separate 200 gpm drainage inflow stream. But alternative treatment technologies and equipment have not been identified, funded, or included in the current construction contract.



Other views of construction on the demonstration project.

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